

NOTES ON SOUTH AFRICAN SPECIES OF ERICA

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Since the treatment of the genus *Erica* by Guthrie and Bolus in the *Flora Capensis* (1905-9), a further 123 South African species have been described. At the same time the study of additional material has served to modify concepts of some species, and, as a complete revision of the genus is not in progress, these notes are submitted with the object of dealing with, or drawing attention to, some of the problems which have been encountered in the course of identification and other routine work in the Bolus Herbarium. It is to be expected that considerable study in the field and possibly, also, statistical analysis will be needed for the satisfactory delimitation of many species of *Erica*.

Species sequence numbers in the *Flora Capensis* are given for convenience of reference.

(68) *E. haematosiphon* G. and B. syn. (47) *E. macropus* G. and B.

With a wider range of material, the distinguishing character used in the key, as to whether the anthers are muticous (as in *E. haematosiphon*) or shortly appendiculate (as in *E. macropus*) no longer appears to be of specific value. (In the closely related species (66) *E. cruenta* Soland, the anthers are said to be muticous or aristate). *E. macropus* has page priority only, and *E. haematosiphon* is chosen as the valid name since it is based on a fuller description and more adequate material.

(68) *E. haematosiphon* G. and B. syn. *E. coralliflora* Compton in *Fl. Pl. S. Afr.* 14: Pl. 551 (1934).

The types of these two species have been compared, together with additional material, and they appear to be conspecific. The range in variation of characters of *E. haematosiphon* is such that the features on which *E. coralliflora* was based, relating to pedicel length, amount of pubescence, slight dilation and constriction of throat, and squarrose set of the leaves, are included in *E. haematosiphon*. (Compton does not refer to the "minute crests" of the anthers as a distinguishing character, but these could be regarded as intermediate between *E. haematosiphon* and *E. macropus*. See paragraph above.) The appearance is suggestive of a shade form.

(74) *E. doliiformis* Salisb. (Sect. Dasyanthes) syn. *E. tenuibractea* Bolus (Sect. Ceramus) in Trans. Roy. Soc. S. Afr. 1: 159 (1909).

The older name was overlooked.

(74) *E. doliiformis* Salisb. (Sect. Dasyanthes) and *E. phillipsii* L. Bol. (Sect. Ephebus) in Journ. Bot. 67: 138 (1928).

The only difference to be observed between these two is that of the marked difference in corolla length. According to records to date they occupy adjacent areas of distribution (Map 1). Field investigation is needed to determine whether corolla length is, in fact, a reliable distinction in this case.

(93) *E. trichroma* Benth. (Sect. Euryloma) and *E. cincta* L. Bol. (Sect. Ephebus) in Ann. Bol. Herb. 3: 174 (1923).

These show close affinities but, although the ovaries are stalked in both species, in *E. trichroma* the stalk is considerably longer.

(122) *E. armata* Kl. ex Benth. (Sect. Myra) syn. *E. umbrosa* H. A. Baker (Sect. Ephebus) in Journ. S.A. Bot. 37: 267.

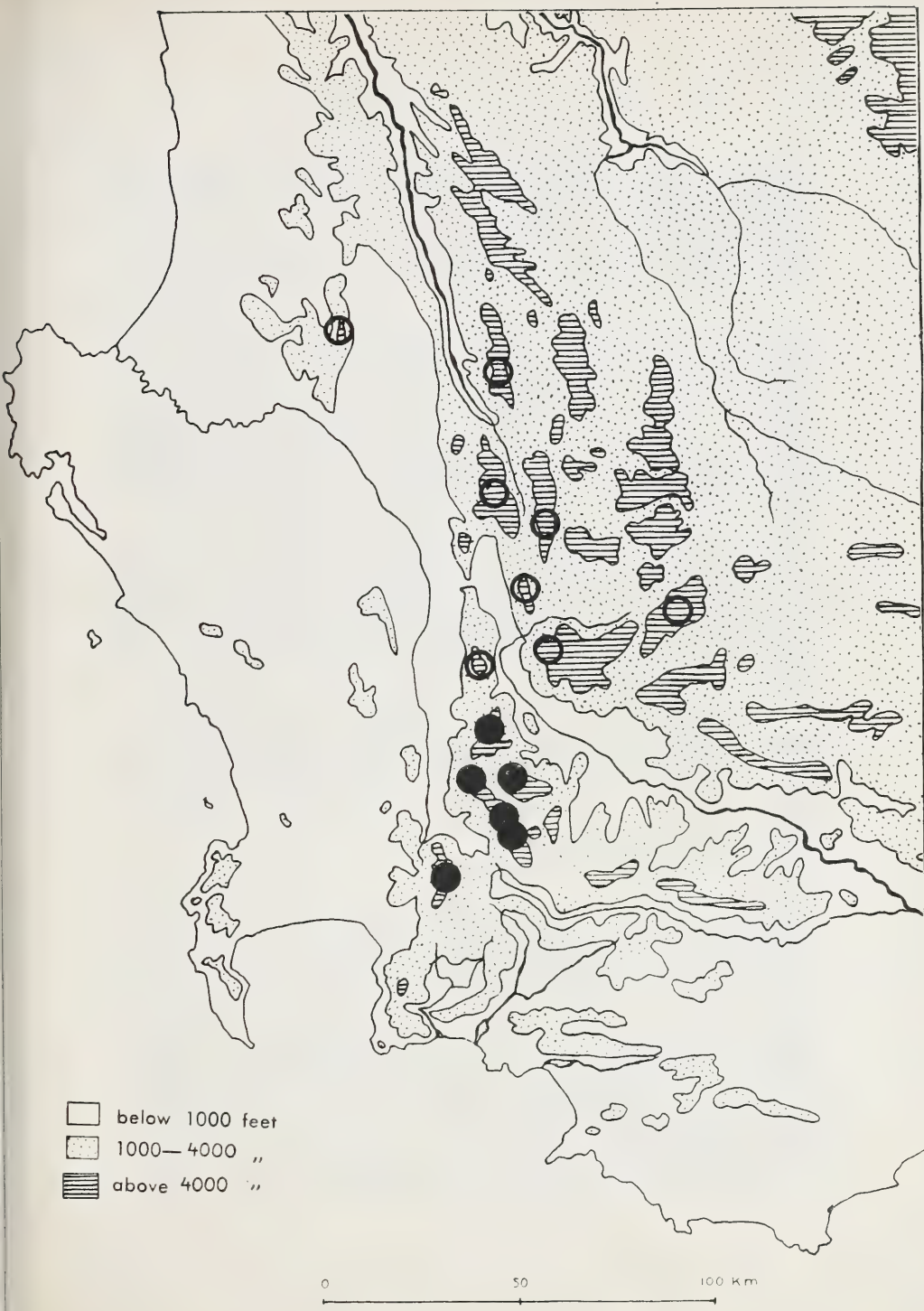
The type of *E. umbrosa* (Oliver 1423 BOL) agrees with the type of *E. armata* (Drege 1148), a fragment of which is in the Bolus Herbarium. Although Guthrie and Bolus placed *E. armata* in Sect. Myra, they observed that it showed affinities with *E. splendens* (*E. tumida*) and with Sect. Ephebus. The inflorescence suggests Dasyanthes.

(122) *E. armata* Kl. ex Benth. var. *breviaristata* Bolus (Sect. Myra) and (211) *E. racemosa* Thunb. var. *aristata* L. Bol. (Sect. Gypsocallis) in Ann. Bol. Herb. 4: 132 (1928).

E. armata var. *breviaristata* is distinct from *E. armata* var. *armata* in having a velvety, not hairy, corolla and an inflorescence in which flowers are terminal and axillary towards the ends of the branches, not confined to the apex. The differences between the pair of allies appear to be: *E. armata* var. *breviaristata*—long corolla tube, anther with minute awns. *E. racemosa* var. *aristata*—short corolla tube, anther with conspicuous awns. Some near intermediates have been found, however, which have the long corolla tube but less minute awns, or the short corolla tube together with less conspicuous awns. Field study and more data will be needed to settle this question.

(197) *E. strigosa* Soland (Sect. Ceramia) differs from *E. racemosa* var. *aristata* in having a glabrous ovary, corolla not contracted towards the throat, and sepals at least half as long as the corolla. The style is not straight as described but curved as in *E. racemosa* var. *aristata*.

(160) *E. trichadenia* Bolus (Sect. Ephebus) and *E. saxatilis* L. Bolus (Sect. Orophanes) in Ann. Bol. Herb. 3: 177 (1923) also show affinities with this group.



MAP 1.
The distribution of *E. doliiformis* (●) and *E. phillipsii* (○).

(139) *E. propendens* Andr. (Sect. Ephebus) syn. *E. dulcis* L. Bolus (Sect. Evanthe) in Ann. Bol. Herb. 2: 154 (1918).

The earlier name was overlooked.

(145) *E. distorta* Bartl. syn. (134) *E. aemula* G. and B. var. *pubescens* G. and B.

E. distorta has been found to have 3-nate as well as 4-nate leaves on the same plant, and if the species is to include 3-nate plants, then the type of *E. aemula* var. *pubescens* (Leipoldt 613) is *E. distorta*. This does not apply to the type of *E. aemula* var. *aemula* (Guthrie 3109 in Bolus Herbarium, marked "Type"). Although the distinguishing character in the key, as to whether the leaves are 3-nate or 4-nate is unworkable, *E. aemula* var. *aemula* appears to be distinct from *E. distorta* in the texture of corolla and leaf surface, and may, possibly, be recognisable by its longer glabrous and shining leaves. Investigation carried out in the type locality, Gordons Bay, should help to settle the matter.

(148) *E. intervallaris* Salisb. (Sect. Ephebus) syn. *E. duthieae* L. Bolus (Sect. Orophanes) in Ann. Bol. Herb. 3: 178 (1923).

The inclusion of plants with glabrous corollas in *E. intervallaris* appears to have been overlooked. *E. intervallaris* provides the perfect link between the two sections. It comes close to *E. parviflora* but seems to be distinct in the tetragonous shape of its corolla and in the proportionately larger corolla lobes.

(153) *E. oresigena* Bolus var. *oresigena* Bolus syn. *E. oresigena* Bolus var. *intermedia* Bolus.

The type of *E. oresigena* var. *intermedia* (Schlechter 10086 in Bol. Herb.), the only cited specimen, is in the fruiting state, which accounts for the difference in corolla shape. *E. oresigena* var. *oresigena*, besides, is not characterised by a constantly puberulous corolla, as implied, Guthrie 4259 having glabrous corollas and later collections being transitional.

(153) *E. oresigena* Bolus var. *mollipila* Bolus.

Bolus Matroosberg, cited as this, matches another sheet, *Bolus* in Herb. Guthrie 4421, same date and locality, but cited as (332) *E. maderi*, with which it agrees. The other specimen cited under *E. oresigena* var. *mollipila*, Bodkin 6492, is distinct, and "corolla pubescent with short and spreading segments" applies to this, not to *Bolus* Matroosberg. The "soft plumose hairs" applies to both. *E. oresigena* var. *mollipila* has not been collected on the Matroosberg, according to our records, but on the Cedarberg and Swartberg ranges, only. This is an interesting distribution pattern.

(210) *E. obtusata* Kl. ex Benth. (Sect. Desmia) and *E. oliveri* H. A. Baker (Sect. Ceramia) in Journ. S.A. Bot. 28: 197 (1962).

The type of *E. oliveri* (Oliver 1555) is remarkable for its long pedicels. It differs in appearance from *E. obtusata* but, essentially, is closely linked to, and possibly a variety or form only of, this species. Members of Sect. *Desmia* are unusual in having a tendency to develop several or more modified scale-like or "bract-like" leaves just below the inflorescence and elsewhere on otherwise normally leafy stems.

(213) *E. petraea* Benth. syn. *E. krigeae* Compton in Journ. S.A. Bot. **1**: 37 (1935).

Krige in Herb. Bol. 13422 (the type of *E. krigeae*) has been compared with *Masson* 66 (the type of *E. petraea*), a fragment of which is in the Bolus Herbarium, together with additional material, and the two appear to be conspecific. In the type description the anthers of *E. petraea* are said to be "breviter aristatis muticisve", not only "very shortly aristulate", as stated in Fl. Cap., and our fragment of the type has anthers either aristulate or muticous. Compton was correct in not referring to the muticous anthers as a distinction between *E. petraea* and *E. krigeae*, but the characters he did use have not proved reliable. The supposed geographical separation is no longer valid since material which matches *E. krigeae* has been collected in the proximity of the "Alpine dry stony places, Camenasieland" (i.e. Kamanassie Mts.) of the type of *E. petraea*.

(215) *E. fucata* Kl. ex Benth. (Sect. *Gypsocallis*) syn. *E. tenuipedicellata* Compton (Sect. *Chlorocodon*) in Journ. S.A. Bot. **19**: 130 (1953).

The type of *E. tenuipedicellata* (Compton 18170 (NBG)) agrees with *Zeyher* 3341, fragments of which are in the Bolus Herbarium. It may not agree with *Bolus* 6739, but this should perhaps be excluded as possibly distinct from *E. fucata*.

(225) *E. bicolor* Thunb. (Sect. *Pyronium*) syn. (327) *E. copiosa* Wendl. var. *longicauda* Bolus (Sect. *Arsace*).

The type of *E. copiosa* var. *longicauda* (*Bodkin* 8678 (BOL)) has been compared with the type description of *E. bicolor* and with specimens referred to this by *Guthrie* and *Bolus*, and appears to be that species. *E. copiosa*, a widespread variable species, is in need of more detailed study.

(230a) *E. recta* Bolus (Sect. *Pyronium*) Fl. Cap. p. 1126 and *E. muirii* L. Bolus (Sect. *Leptodendron*) in Ann. Bol. Herb. **1**: 76 (1914).

These may prove to be synonymous. There is a slight difference between the anthers of the two types, that of *E. muirii* (*Muir* 1061) having the awn very shortly connate with the filament, while that of *E. recta* (*Marloth* 8993) is free. In other respects there seems to be no specific difference.

(246) *E. lateralis* Willd. (Sect. *Orophanes*) syn. (304) *E. haemantha* Bolus (Sect. *Hermes*).

The older name was overlooked. *E. haemantha* was treated as a member of Sect. *Hermes* by Guthrie and Bolus because of the presence of supposedly axillary flowers besides the terminal ones in *Bolus* 5344, the type and only representative. These axillary flowers could be regarded, however, as terminal on reduced flowering shoots. This was the view taken of the inflorescence of *E. lateralis*, described in Fl. Cap. as "sometimes pseudo-racemose" and in the type description as "floribus terminalibus et axillaribus".

(246) *E. lateralis* Willd. syn. *E. montana* L. Bol. in Ann. Bol. Herb. 3: 177 (1923).

The type of *E. montana* (*Stokoe* s.n. in Bolus Herbarium 15940) has been compared with the type description of *E. lateralis* and with material referred to it by Guthrie and Bolus, together with additional material and the two appear to be conspecific.

(277) *E. nubigena* Bolus in Journ. Bot. 32: 236 (1894) syn. (271) *E. macra* G. and B. in Fl. Cap.

The type of *E. macra* (*Bolus* in Herb. Guthrie 3948) is part of an old twiggy, less vigorous plant with smaller flowers than the cited specimens of *E. nubigena*. A note on the sheet indicates that Bolus compared *E. macra* with *E. mucosa*, whereas he compared *E. nubigena* with *E. physodes* and *E. ardens*, thus overlooking the true affinity. The two are separated in the key on the shape of anther crest, but these are given in the descriptions as "lanceolate at the base tapering to a long fine point" for *E. macra* and "subulate-acuminate from a broadish base" for *E. nubigena*, which are virtually identical.

(290) *E. carduifolia* Salisb. syn. *E. draconis* L. Bolus in Ann. Bol. Herb. 4: 130 (1928).

E. draconis was compared with *E. nubigena*: hence the true affinity was overlooked.

(297) *E. regerminans* L. syn. (305) *E. pulvinata* G. and B. var. *montana* G. and B.

The type of *E. pulvinata* var. *montana* (Burchell 7111 (BOL)) has a short pseudo-raceme, unlike the usual long one of *E. regerminans*, but agrees with it in essential characters.

In the key to *Hermes* a distinguishing character is used as to whether the anthers are "broadish-aristate" or "narrow-crested", which is not very clear, and the descriptions are not explanatory as *E. regerminans* is described as having anthers "crested-aristate" while *E. pulvinata* has "broad-aristate" ones. *E. pulvinata* is very distinct from *E. regerminans*, however, and may be recognised on the leaf and sepal characters, used in the key.

(301) *E. parilis* Salisb. (Sect. Hermes) syn. (20) *E. longisepala* G. and B. (Sect. Pleurocallis).

The type of *E. longisepala* (*Mader* in Cape Govt. Herb.) matches *Leipoldt* 616, referred to *E. parilis*, and agrees with the type description of *E. parilis*.

(333) *E. sphaerocephala* Wendl. ex Benth. syn. (337) *E. oxysepala* G. and B. var. *pubescens* G. and B.

E. oxysepala is distinguished from *E. sphaerocephala* in the key on its 3-nate instead of 4-nate leaves. It has been found, however, on close examination of specimens cited in Fl. Cap. that the leaves are not constantly 4-nate in *E. sphaerocephala* but may be irregular or 3-nate. (This irregular arrangement of leaves was noted for *E. maderi*, a very close species). If, therefore, *E. sphaerocephala* is to include 3-nate plants then *Schlechter* 10157 (the type of *E. oxysepala* var. *pubescens*) is *E. sphaerocephala*.

E. oxysepala var. *oxysepala* may be distinguished from both *E. sphaerocephala* and *E. maderi* by the absence of plumose hairs, the different shape of its "gland-ciliate" sepals and by its glabrous setaceous-acuminate leaves. It appears to be restricted to the Tulbagh Div. In the Gothenburg Herbarium a *Schlechter* sheet labelled "Elim XII 11896" matches our sheet of *Schlechter* 7495, and we suggest that "Elim XII" may be an error.

(334) *E. solandra* Andr.

The only record from Natal is *Schlechter* 6938, van Reenens Pass, which is¹ not *E. solandra* but is *E. reenensis* Zahlbr. in Ann. Naturhist. Hofmus Wien 20: 37 (1905). The species appear to be very close, but more adequate material is needed for comparison.

In the key to *Pseuderemia*, *E. reenensis* should be substituted for *E. solandra* under "corolla glabrous", and on p. 229, line 11 of the description of *E. solandra* the words "or glabrous" deleted. This serves to distinguish the two, on our present material. Besides the absence of gland-tipped hairs in these two species, noted by Verdoorn (1954), there is also an absence of the plumose hairs which are a feature of *E. cooperi* and *E. baurii* from Natal and E. Prov.

(403) *E. nobilis* G. and B. syn. *E. haroldiana* Skan, in Curt. Bot. Mag. 8835 (1920).

The sepals of *E. nobilis* vary in width and also, to some extent, in length relative to length of corolla. It must be taken into account that *E. haroldiana* was based on a greenhouse plant.

(421) *E. depressa* L. syn. *E. cremnophila* Esterhuysen and Salter in Journ. S.A. Bot. 6: 1 (1940).

Salter (1950) refers to *E. cremnophila* as "probably a more dwarf habitat form" of *E. depressa*. There is no doubt, though, that they are sun and shade forms of the same species. The characters used by the authors of *E. cremnophila* to distinguish it from *E. depressa*, "the smaller size of all its parts, smaller and narrower leaves, colour of the more broadly campanulate corolla, and proportionately broader and shorter anthers" are differences in degree and hardly effect separation at specific level. The colour of the corolla is "rosy pink on the side facing the light and almost white on the other side". Finally the anthers are stated to be oblique at the base, but this was an insignificant difference, and proved to be unreliable.

(427) *E. fimbriata* Andr. (Sect. Trigemma) syn. (358) *E. physantha* Benth. var. *aristulata* Bolus (Sect. Geissostegia) Fl. Cap. 1127.

Bolus recognised, subsequently, that the two were synonymous. A note in his register states, "Distributed as *physantha* afterwards corrected". Sets were distributed to "K. Berl. Schltr. Galpin".

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